

# KEY SKILLS The determinants of health and individual human development of Australia's children

## KEY SKILL

Explain the determinants of health and individual human development and their impact on children, using relevant examples

In order to demonstrate this skill, a thorough understanding of the determinants of health and individual human development and how they relate to children is essential. The ability to use relevant examples to demonstrate this understanding is expected. When outlining the determinants of health and individual human development, it is important to remember the following:

- There is a significantly large range of factors that affect the health and individual human development of a population. It is important to select those factors that are listed in the study design (i.e. biological, behavioural, physical environment and social environment) as these are considered to be the most relevant.
- Focus on factors that are relevant to the childhood stage of the lifespan and ensure that the discussion makes reference to how the selected factor impacts on children.
- In order to clearly demonstrate an understanding of the impact of a selected determinant of health on the health and individual human development of children, it is important to first outline what the factor is.
- The determinants of health and individual human development help to explain or predict trends in health. When outlining the impact of a selected determinant, it is important to explain the way in which it impacts on the health and individual human development of children.
- Where possible, use relevant statistics that outline the impact that the selected determinant has on the health and individual human development of children.

Consider the following article, which discusses a behavioural determinant of health and individual human development: parental smoking.

### 1 'CHILDREN OF SMOKING MOTHERS FACE HIGHER CANCER RISK'

Children are up to five times more likely to develop cancers<sup>2</sup> if their mums smoke while pregnant,<sup>3</sup> new Australian research shows.

Leukaemia, brain, kidney and eye cancers are common in children whose mothers smoked<sup>4</sup> during pregnancy.

And babies admitted to neonatal intensive-care units face the greatest risks.

Researchers assessed more than one million births recorded across NSW from 1994 to 2005 and found 948 cases in which the growing child went onto develop a cancer.<sup>5</sup>

Although smoking during pregnancy has long been known to cause birth complications, scientists have never before drawn a direct link with cancer.

Professor Jim Bishop, chief executive of the Cancer Institute of NSW, said 17 per cent of Australian women admit to smoking during their pregnancy.

'There is more and more evidence accumulating that pregnancy and smoking don't go together,' Prof Bishop says.

The study found babies with low birth-weight had 1.7 times the risk of developing leukaemia and 1.8 times the risk of developing cancer of the brain or central nervous system.<sup>6</sup>

Newborns in need of ICU care were at most risk — their chance of developing any cancer was 2.7 times increased while for eye cancer the risk was four times, five times for kidney cancer.<sup>7</sup>

Prof Bishop said smoking during pregnancy was not the only cause of premature birth or other health complications in newborns.

'But it is clear that we can do something about those complications — that is not to smoke during pregnancy,' he said.

Children born to smokers also had higher rates of asthma,<sup>8</sup> Prof Bishop says.

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'Everybody knows that smoking causes cancer, stroke, heart disease and emphysema but all mothers and mums-to-be should also understand the potential damage to a child caused by prenatal smoking,' she said.

Source: 'Children of smoking mothers face higher cancer risk', 12 January 2009, © 2009 AAP.

1 Subject matter of the article provides a relevant example of the impact on children's health of a behavioural determinant.

2 Relevant statistical information highlights the impact of the determinant on the health of children.

3 Parental smoking — a behavioural determinant of health and individual human development as listed in the study design

4 Information regarding the impact of parental smoking on the health of children

5 Statistical data that highlights the impact of parental smoking on the health of children

6 Information demonstrating the link between parental smoking and health

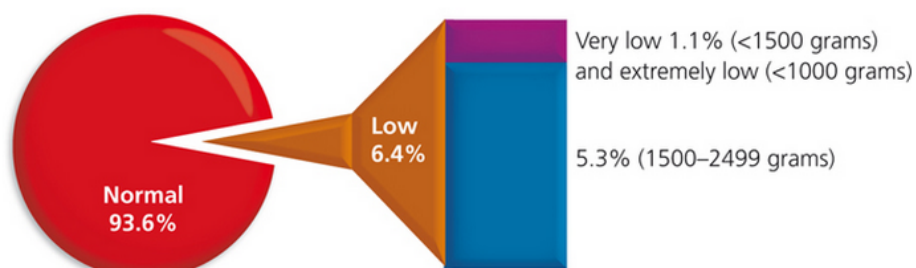
7 Statistical data highlighting the impact of parental smoking on the health of children

8 The impact of parental smoking on the health of children

Consider the following information on a genetic determinant of health and individual human development: low birth weight.

- Infants who are born with low birth weight are at greater risk of poor health, disability and death than other infants.
- In 2006, 6.4 per cent of live born infants in Australia were of low birth weight (weighing less than 2500 grams). This proportion was twice as high among babies of indigenous mothers.
- 1.1 per cent weighed less than 1500 grams (very low birth weight, including extremely low birth weight).
- 5.3 per cent weighed between 1500 and 2499 grams.

Source: Australian Institute of Health and Welfare 2009, *A picture of Australia's children 2009*, cat. no. PHE 112, Canberra, p. 72.



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**FIGURE 7.52** Proportion of infants by birth weight category, 2006

